



# AK RIDGE RESERVATION

Environmental Management

April 6, 1998

Mr. Rod Nelson  
Assistant Manager for Environmental Management  
DOE/ORO/EM  
P.O. Box 2001  
Oak Ridge, TN 37831

**RE: Accuracy in Describing the Relationships Among the Oak Ridge Reservation, the City of Oak Ridge, and the Surrounding Populated Areas**

Dear Mr. Nelson:

The Oak Ridge Reservation (ORR) of the Department of Energy (DOE) borders against Knox and Loudon counties and lies almost entirely within the City of Oak Ridge and the counties of Anderson and Roane. The basic situation has not changed since the City incorporated in 1959, though some areas have been annexed and the populations of the counties continue to rise.

Many documents prepared for the DOE's Oak Ridge Operations Office (DOE/ORO) speak in some way of the distance from the reservation to nearby Oak Ridge, and reflect other cities as dots on compressed maps. While occasional flaws are anticipated in draft documents, populations near the reservations need to be properly represented.

Maps in documents that one might use when considering the possible spread of contamination from the ORR do not represent the location of nearby populations either inside or outside the City of Oak Ridge. For example, the populated portion of the city closest to the ETTP, annexed several years ago, has yet to appear on DOE or DOE contractor maps.

Some of the persons having residences in this ("Westwood") area live about half the distance from the ETTP suggested by the available DOE illustrations of the nearest off-ORR part of Oak Ridge, and thus might expect to receive greater air concentration from air emissions originating in the ETTP area than would a person living in the areas shown. (The average concentration from air dispersion of any contaminant depends on relative altitude and the effect of hills as well as the distance and direction from the source, so the effect of reduced distance might not yield the increased air concentration that would be anticipated if the terrain were flat.)

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Reports that involve municipal utilities have sometimes badly misreported the connections between City utilities and those belonging to the DOE. In the future, public entities may own and operate electric power, water, and waste water systems at East Tennessee Technology Park (ETTP) and ED-1. Furthermore, the City of Oak Ridge codes, regulations, and ordinances apply to construction and modification by private lessees on the ORR to the extent that federal primacy permits.

To correct the first problem, the Oak Ridge Reservation Environmental Management Site Specific Advisory Board (ORREMSSAB) recommends that DOE/EM routinely notify contractors of the actual geographic boundaries of the ORR and the City of Oak Ridge. On an appropriate scale, the geographical extent of nearby cities should also be shown. Accuracy is required in describing the relation of operations on the ORR to any municipal entity.

As for properly representing the relationship of any ORR release points to the surrounding population, basic population maps need to be prepared. Broader scale maps showing the smallest census units could be shaded to illustrate the varying population density. Enlarged fine-scale maps could roughly represent streets and/or dwelling units, providing approximate shading related to population. At every map scale an appropriate wind rose should be printed, obtained at a stated position and altitude, to indicate the prevailing air movement patterns. In any case the reader should be encouraged to appreciate the density of the nearby population. Streams should also be clearly indicated.

The ORREMSSAB looks forward to your responses to these suggestions and a corresponding improvement in future documents.

Sincerely,

*William M. Pardue*

William M. Pardue, Chair

WMP/sb

cc: Marianne Heiskell, DOE/ORO  
Earl Leming, TDEC  
John Hankinson, USEPA Region IV  
Karol Hazard, DOE/HQ  
Susan Gawarecki, LOC  
ORREMSSAB Members

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